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EXAMINER

WU, VICKI H

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/523,772	Applicant(s) GRZONKA, HORST	
	Examiner VICKI WU	Art Unit 4122	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12-23, 25-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-23, 25-31 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 February 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/06/2005, 08/08/2006, 10/25/2006, 03/29/2007,</u> | 6) <input type="checkbox"/> Other: ____. |
| <u>04/27/2007.</u> | |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1 recites the limitation "the joint abutment". There is insufficient antecedent basis for this limitation in the claim.

3. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 18-23 should have been renumbered 26-33.

Drawings

4. Figures 1, 3, 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the

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applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102/103

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1, 2 and 10 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Berger (4,675,064) (Berger).

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Berger teaches a cigarette comprised of a tobacco rod (12) and filter element (14) (wrapped in a wrapper (18)), wherein said tobacco rod and filter element are joined in axial alignment by a strip of tipping paper (16) (Figure 1; column 3 lines 25-40).

With regard to the tipping paper or other wrapper having an inherent permeability of 50-500 CU, it should be noted that the cigarette of the Berger teaches a tipping paper as that claimed. No distinction between the tipping paper claimed and that of Berger is seen. Therefore, the tipping paper of Berger would inherently have the inherent permeability of 50-500 CU.

Alternatively, lacking a clear distinction between the claimed tipping paper and that of Berger, it would be expected that the tipping paper of Berger would possess the inherent permeability range as claimed.

With regard to claim 2, Berger teaches that the strip material (16) may be comprised of tipping paper (column 3 lines 25-40; Figure 1).

With regard to claim 10, Berger teaches that the tipping paper wrapped about the filter is provided with ventilation holes (column 4 lines 55-63).

Claim Rejections - 35 USC § 102

9. Claim 26 is rejected under 35 U.S.C. 102(b) as being anticipated by Molins. Molins teaches a method of reducing filter-tip cigarette manufacturing cost comprising providing batches of filters wrapped along their length in a tipping paper or other wrapper being other than plugwrap (column 2 lines 18-35; column 5 lines 20-25), with each batch of wrapper filters having a predetermined ventilation level and being

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sourced from the same filter making machine (22, 26) (Figure 1; column 2 lines 54-68); supplying the batches of filters to respective filter tip assembly machines capable of producing a double cigarette assembly of a double filter between two wrapped tobacco rods (column 2 lines 25-35; column 6 lines 5-10), each filter tip assembly machine utilizing two narrow strips of material to inter-attach the double filter and two wrapped tobacco rods (column 1 lines 55-70; column 3 lines 15-40), cutting the double filter to provide two filter tip cigarettes (column 6 lines 20-40), and thereby producing batches of filter tip cigarettes (58) with varying ventilation levels from a plurality of filter tip assembly machines (Figure 1).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berger in view of Barnes et al. (5,819,751) (Barnes). Berger has been discussed above. Berger however does not expressly disclose that the strip material is made of foil material.

Barnes teaches in a method of manufacturing cigarettes the use of a wrapper for circumscribing/ connecting the jacketed fuel element (18) and substrate section (20) of

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a cigarette in which the wrapper (32) is made of foil material and is used for limiting the amount of oxygen which will reach the burning portion of the fuel element (10) during use of the cigarette, preventing the wicking of aerosol-forming materials from the substrate (22) to the fuel element (10), the insulating jacket (12) and/or from staining of the other cigarette components. The foil wrapper also would minimize / prevent peripheral air (i.e., radial air) from flowing to the portion of the fuel element (10) disposed longitudinally behind its front edge, thereby causing oxygen deprivation and preventing excessive combustion (Figure 1; col. 3 lines 20-30; col. 5, lines 33-49). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the foil material of Barnes to make the strip material of Berger. The rationale to do so would be derived from the teachings of Barnes for using the foil material in order to minimize/prevent peripheral air from flowing to the portion of the fuel element, thereby causing oxygen deprivation and preventing excessive combustion.

Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger in view of Molins et al. (4,040,430) (Molins).

Berger has been discussed above. However, regarding the limitations of Claims 4-6, Berger does not expressly disclose that the strip material may be printed or imprinted, and comprise a width between 4-12 mm or 6-10 mm.

Molins teaches that it is well known for cigarette manufacturers to print a brand identification on the tobacco section wrapper. The strip material may be printed for the purpose of distinguishing the brand identification of the cigarettes (column 6 lines 5-10)

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and said strip material may have a width of 7 mm for the purpose of suitably uniting the tobacco section with the filter elements of the cigarettes (column 5 lines 15-25).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the printed / imprinted strip material with the disclosed width of Molins to make the cigarette of Berger. The rationale to do so would have been to print the brand identification of the cigarette on the wrapper near the tobacco section (Molins: column 6 lines 5-10) and for economic reasons: a conventional cigarette of length 85 mm could have its filter element and tobacco rod joined with only 7 mm of uniting strip material using 7 mm of glue, instead of the conventional 23 mm of glue).

Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger in view of Perfetti et al. (4,998,541) (Perfetti).

Berger has been discussed above. However, Berger does not expressly disclose that the strip of material extends over a maximum of 20% of the filter length, or less than 15% of the filter length.

Perfetti teaches that the tipping material (45) connecting the filter element (30) and tobacco rod (15) of the cigarette circumscribes the entire length of the filter element (and an adjacent region of the tobacco rod) (column 3 lines 5-10; Figure 1). Perfetti also teaches that the filter element typically has a length of 20-35 mm (column 3 lines 35-40) and that the tipping material connecting the filter element and tobacco rod of the cigarette extends about 3-6 mm (column 4 lines 40-45). Thus, the tipping material extends over less than 15% of the length of the filter.

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It would have been obvious to one ordinarily skilled in the art to combine the strip material of Berger with the configuration of the strip material on the cigarette of Perfetti. The rationale to do so would have been to enhance control over the performance characteristics of the cigarette, as the strip material may comprise perforations whose total surface area and its specific positioning along the periphery of the cigarette affect its performance (Perfetti: column 4 lines 50-56).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berger in view of Perfetti and in further view of Molins.

Berger and Perfetti have been discussed above. Berger in view of Perfetti however fail to disclose that the degree of coverage of the strip of material joining the filter and tobacco rod is equal.

Perfetti teaches a strip material that circumscribes the filter element and an adjacent region of the tobacco rod extends about 3-6 mm along the length of the tobacco rod (column 4 lines 40-45).

Molins teaches that a strip material manufactured to combine the tobacco rod and filter element of a cigarette in a similar manner has a width of 7 mm (column 5 lines 20-25).

It would have been obvious to one ordinarily skilled in the art to combine the strip material of Berger with the configuration of the strip material on the cigarette of Perfetti. The rationale to do so would have been to enhance control over the performance characteristics of the cigarette, as the strip material may comprise perforations whose

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total surface area and specific positioning along the periphery of the cigarette affect its performance (Perfetti: column 4 lines 50-56).

Since Perfetti and Molins combine to teach the same material – the measurements of the strip material– and its configuration in the cigarette is in the same manner as instantly claimed, one of ordinary skill in the art at the time the invention was made would have expected that the strip material (about 7 mm as disclosed in Molins) would indeed impart an approximately equal degree of coverage to the tobacco rod and filter element (if the strip material covered about 3.5 mm of the length of the tobacco rod (which would be within the range disclosed in Perfetti), then the strip material would cover about 3.5 mm of the length of the filter element).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berger in view of Salonen et al. (5,595,196) (Salonen).

Berger has been discussed above. Berger however, does not expressly disclose that said tipping paper enwrapping said filter element have a basis weight of 25-45 g/m².

Salonen teaches a process for manufacturing filter cigarettes with tipping paper of basis weight 28-40 g/m² (column 3 lines 54-60). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the weight basis of the tipping paper of Salonen with the wrapper of the filter element of Berger. The rationale to do so would have been that the base tipping paper of Salonen has

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improved lip release properties, meaning that the smoker may more easily release the tipping paper from their lips while using the cigarette (Salonen: column 1 lines 10-30).

Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger in view of Bushby et al. (6,935,346) (Bushby).

Berger has been discussed above. However, Berger does not expressly disclose that the wrapper surrounding the tobacco rod of said cigarette may comprise a particulate ceramic filler of predefined shape and a binder, with optional ash improver and/or burn additive, wherein said ceramic filler is alumina (or another similar thermally stable metal oxide / metal salt), is present in the range of 50-95% by weight of the wrapper, and has a particle size of 2-90 μm (with a mean particle size of 50 μm).

Bushby teaches a smoking article comprising a wrapper material enwrapping a tobacco smoking material, the wrapper containing a proportion of ceramic filler of predefined shape, a binder, and optionally a burn additive and / or ash improver (column 2 lines 28-36); with said filler present in the range of 50-95% by weight of said wrapper (column 2 line 66 - column 3 line 3). Bushby teaches that said filler also has a particle size in the range of 2-90 μm , with a mean particle size of 50 μm (column 2 lines 46-55), and is comprised of thermally stable metal oxide or metal salt (column 2 lines 56-65).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the filler elements in the tobacco rod wrapper of Bushby to make the cigarette of Berger. The rationale to do so would have been to reduce

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sidestream smoke levels by using a wrapper comprising a ceramic material being capable of mechanically trapping mainly aqueous particulate phase materials (Bushby: Abstract). Bushby describes the predefined shape of the ceramic filler (substantially spherical / oval), the disclosed particle size of said filler, the use of an insoluble metal oxide in said filler, and the amount of said filler present by weight in said wrapper (50-95%) as technically highly advantageous for said objective (Bushby: column 2 lines 40-55; column 3 lines 1-5). The burn additive would give optimal burn characteristics and the most acceptable ash color upon smoking (Bushby: column 3 lines 39-45).

Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger in view of Adams et al. (4,784,163) (Adams) and in further view of Browne (*The Design of Cigarettes* (1981)) (Browne).

Berger has been discussed above. However, Berger does not expressly disclose that said other wrapper enwrapping said filter element is comprised of a barrier material with a pore size of less than about 5 μm or less than about 1 μm .

Adams teaches a porous wrapper for a smoking rod having a pore size in the range of about 1 μm (column 3 lines 37-47). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the wrapper for the smoking rod of Adams with the other wrapper of the filter element of Berger. The rationale to do so would have been to prevent ink particles (from the printing on the cigarette surface) from permeating through the wrapper (Adams: column 3 lines 30-36).

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Also, it is generally known in the art that the porosity of the wrapper for the filter element of a cigarette directly affects the ventilation level of the cigarette, which in turn controls the amount of smoke delivery during consumption of said cigarette (Browne: pages 47-49). Thus it would be obvious to one ordinarily skilled in the art to decrease and / or minimize the pore size of the wrapper in order to achieve a specified level of ventilation for the cigarette.

Claims 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger in view of Clarke et al. (6,718,989) (Clarke).

Berger has been discussed above. However, Berger does not expressly disclose that the wrapper of the filter element may be comprised of a perforated barrier material (50-5000 CU/cm length) comprised of a vaporous, porous polymeric material, and with particulate material (activated charcoal, activated carbon, or molecular sieves) applied at a predetermined location on said barrier material.

Clarke teaches a filter cigarette enwrapped in highly porous (2,000 CU) paper that may be comprised of a polyethylene layer (column 5 lines 19-35) as well as particles of activated carbon that have been uniformly distributed at predetermined locations on said paper (column 8 lines 32-40; Figure 16).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the paper surrounding the filter element of Clarke with the cigarette of Berger. The rationale to do so would have been that the high porosity of the barrier material of Clarke would provide for dilution (by ventilation air) of non-filtered

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smoke directly delivered to the smoker, improving control over the ratio of non-filtered to filtered smoke being delivered to the smoker and resulting in a milder, more aromatic, enjoyable smoke (Clarke: column 1 lines 15-55; column 2 lines 15-20; column 4 lines 30-40). The polyethylene layer of the wrapper may also contribute to the biodegradability of the overall cigarette (Clarke: column 6 lines 15-20), and the particulate material of activated charcoal helps adsorb vapor phase components in the smoke from the cigarette (Clarke: column 8 lines 35-40).

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berger in view of Salonen.

Berger has been discussed above. Berger however does not expressly disclose that said strip of tipping paper have a basis weight of 20-50 g/m².

Salonen teaches a process for manufacturing filter cigarettes with tipping paper of basis weight 28-40 g/m² (column 3 lines 54-60). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the weight basis of the tipping paper of Salonen with the strip of Berger. The rationale to do so would have been that the base tipping paper of Salonen has improved lip release properties, meaning that the smoker may more easily release the tipping paper from their lips while using the cigarette (Salonen: column 1 lines 10-30).

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Molins in view of Berger and in further view of Clarke.

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Molins teaches an assembly method of producing filter cigarettes comprising a filter wrapped in tipping paper or other wrapper being other than a plugwrap (column 5 lines 15-24) and a tobacco rod wrapped in a wrapper (column 6 lines 5-11).

Molins does not expressly disclose that batches of filter tow are wrapped in tipping paper (or other wrapper being other than plugwrap), said paper having been treated with particulate matter at a station prior to unification of the filter elements and wrapped tobacco rods.

Berger teaches the continuous filter tow being treated before being wrapped (column 5 lines 20-40) while Clarke teaches the use of particulate matter in the filter wrapper (column 8 lines 30-40; Figure 16).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate the process of treating the filter tow of Berger and the incorporation of the particulate matter into the filter wrapper of Clarke with the assembly method of Molins. The rationale to do so would have been to make the assembly process faster and more cost efficient, as both the filter wrapper and filter tow may be comprised of cellulose acetate, meaning that any lost material may be recycled into the assembly to form new filter wrapper (Berger: column 6 lines 15-20); additionally, the inclusion of particulate matter (activated carbon) of Clarke in the filter wrapper would adsorb vapor phase components in the smoke from the manufactured cigarette, possibly reducing sidestream smoke (Clarke: column 8 lines 33-41).

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Claims 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Molins in view of Perfetti.

Molins does not expressly disclose that the wrapper of the filter element may be comprised of tipping paper provided with ventilation holes (either during or after manufacture) made mechanically or by laser means.

Perfetti teaches a cigarette with the filter element wrapped in tipping paper, wherein said paper is provided with ventilation holes that may be made mechanically or by lasers (column 4 lines 45-55). It would have been obvious to one with ordinary skill in the art at the time the invention was made to combine the tipping paper of Perfetti with the cigarettes made by the assembly of Molins. The rationale to do so would have been that the perforations in the tipping paper would provide a means for providing air dilution of drawn mainstream smoke with ambient air while smoking, a desirable feature of modern cigarettes (Perfetti: column 1 lines 15-20; column 4 lines 47-53). The perforations themselves (and their positioning, total surface area, etc.) also may be used to control the performance characteristics of the cigarette (Perfetti: column 4 lines 50-55). The use of lasers or mechanical means to make said perforations is well known to those skilled in the art, as evidenced by Rofin (Lasers for Industry: Perforating Perforations) and Knight (EP 578385 A1) (column 1 lines 1-10). Thus the incorporation of a perforated tipping paper (with the perforations made mechanically or by laser means) to enwrap the filter elements of cigarettes would allow the assembly method of Molins to make a more desirable cigarette.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to VICKI WU whose telephone number is (571)270-7666. The examiner can normally be reached on M-F (8:30 am-6 pm), every other Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/V.W./
Patent Examiner, GAU 4122

/Milton I. Cano/
Supervisory Patent Examiner, Art Unit 4122